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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,189	02/15/2002	Tong Liu	ACT-322	2718

7590 12/15/2004

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EXAMINER

THOMPSON, ANNETTE M

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,189

Applicant(s)

LIU ET AL.

Examiner

A. M. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 September 2004 has been entered.
2. Applicants' amendment to application 10/077,189 has been examined and remarks reviewed. The specification and drawings are amended. Claims 1, 6, and 7 are amended. Claims 1-7 are pending.
3. Applicants' amendment has been fully considered but is not deemed to be persuasive. The applicable rejections from the prior office action are incorporated herein.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means", "said," and comprising should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

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disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains claim language and is non-narrative. Correction is required. See MPEP § 608.01(b).

Claim Objections

6. Claim 7 is objected to for the following reasons: Pursuant to claim 7, at line 3, change "gated" to - -gate- -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Rejection of claims 1-7

8. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaptanoglu, U.S. Patent 6,285,212. Kaptanoglu discloses a FPGA architecture.

9. Pursuant to claim 1, Kaptanoglu discloses a freeway routing system comprising a plurality of FPGA tiles comprising a plurality of functional groups arranged in rows and columns (Fig. 2; col. 2, ll. 28-37; col. 3, ll. 1-12); a plurality of interface groups surrounding the plurality of functional groups (col. 2, ll. 30-33; Fig. 1, #14) such that one IG is positioned at each end of each row and column; a first set of routing conductors configured to transfer signals (col. 2, ll. 28-37); said first set of routing conductors

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comprising a plurality of vertical conductors that form intersections with a plurality of horizontal conductors and programmable interconnect elements (col. 6, line 60 to col. 7, line 16) located at said intersections of said plurality of vertical conductors and said plurality of horizontal conductors in a diagonal orientation thus connecting each one of said plurality of horizontal conductors to one of said plurality of vertical conductors (col. 3, ll. 13-36; see also col. 8, line 66 to col. 9, line 4; col. 10, ll. 6-21).

10. Pursuant to claim 2, further comprising a second set of routing conductors configured to transfer signals. . . (Fig. 1, illustrates multiple FPGA tiles).

11. Pursuant to claim 3, further comprising programmable interconnect elements (col. 6, ll. 5-19, the F-tab; col. 7, ll. 4-16, the E-turn) located at the connections between adjacent FPGA tiles.

12. Pursuant to claim 4, wherein the diagonally oriented programmable interconnects are arranged from the upper left corner of a FPGA tile to the lower right corner of the FPGA tile (Fig. 6, #60; col. 10, ll. 51-67; col. 11, ll. 1-22).

13. Pursuant to claim 5, wherein the diagonally oriented programmable interconnects are arranged from the upper right corner of a FPGA tile to the lower left corner of the FPGA tile (Fig. 6, #6; col. 10, line 35 to col. 11, line 22).

14. Pursuant to claim 6, wherein the freeway set of routing conductors are configured to transfer signals from output ports of one Input/Output of said field programmable gate array (col. 4, ll. 31-43; col. 11, ll. 1-22).

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15. Pursuant to claim 7, wherein the freeway set of routing conductors are configured to transfer signals from output ports of one RAM in said field programmable gate array (col. 11, ll. 7-22).

Response to Remarks

16. Applicants' revised abstract is not approved; it still lacks narrative format and contains claim phraseology (Line 2 needs rephrasing; "field" is misspelled); Line 3 recites "said intersections" which is considered claim phraseology.

17. Applicants' have filed an RCE with minimal claim Amendments that fail to overcome the prior art of Kaptanoglu. Again, as stated in the last final rejection, Kaptanoglu discloses vertical and horizontal conductors with the interconnects arranged in a diagonal manner to connect one horizontal conductor to one vertical conductor (see e.g. Abstract; col. 3, ll. 12-33). This rejection is therefore maintained.

Conclusion

18. This is a continued examination of Application No. 10/077,189. All claims are drawn to the same invention claimed earlier and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications should be directed to Examiner A.M. Thompson whose telephone number is (571) 272-1909. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 4:30 p.m..

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

20. Responses to this action should be mailed to the appropriate mail stop:

Mail Stop _____

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for all **OFFICIAL** communications intended for entry)

A. M. Thompson
Primary Examiner
Technology Center Z800

